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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,160	03/23/2004	Hirotsuna Miura	119210	2178

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OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
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EXAMINER

RUTHKOSKY, MARK

ART UNIT	PAPER NUMBER
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1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/806,160

Applicant(s)

MIURA ET AL.

Examiner

Mark Ruthkosky

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/28/04; 7/1/05; 12/22/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statements filed 6/28/2004, 7/7/2005, 12/22/2005 and 3/22/2007 have been placed in the application file, and the information referred to therein has been considered as to the merits.

### ***Drawings***

The drawings filed on 3/23/2004 have been approved.

### ***Election/Restrictions***

Applicant's application includes two distinct inventions including a fuel cell and a method of manufacturing a fuel cell. As claimed, the two inventions are sufficiently similar to require a single search. However, if further limitations are added to define more specific manufacturing steps or if product limitations are added that are not found in the method, the inventions will be subject to a restriction requirement. Further, claims 7-8 are distinct inventions and may be subject to restriction if further limitations are added to define the power supply or vehicle.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5 and 7 are rejected under 35 U.S.C. 102(c) as being anticipated by Beattie et al. (US 6,667,127.)

The instant claims are to a fuel cell comprising a first substrate provided with a gas flow path, to supply a first reaction gas; a first electron collection layer formed on the first substrate; a first reaction layer formed on the first electron collection layer; an electrolyte film formed on the first reaction layer; a second reaction layer formed on the electrolyte film; a second electron collection layer formed on the second reaction layer; and a second substrate provided with a second gas flow path to supply a second reaction gas, at least one of the first electron collection layer and the second electron collection layer constructed by stacking conductive material particles. A method of manufacturing a fuel cell is also claimed.

Beattie et al. (US 6,667,127) teaches a fuel cell comprising a first substrate provided with a gas flow path, to supply a first reaction gas; a first electron collection layer formed on the first substrate; a first reaction layer formed on the first electron collection layer; an electrolyte film

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formed on the first reaction layer; a second reaction layer formed on the electrolyte film; a second electron collection layer formed on the second reaction layer; and a second substrate provided with a second gas flow path to supply a second reaction gas, at least one of the first electron collection layer and the second electron collection layer constructed by stacking conductive material particles (see figure 1, claims 1-42, col. 1, line 48 to col. 2, line 50.) The electron conductive layer (gas diffusion layer) is constructed with stacked conductive particles (see figure 1.) The gas flow path may be formed in the current collector separator plate. The gas diffusion layer is adjacent the flow plate for gas diffusion to the reaction layer (catalyst.) The catalyst includes stacked metal particles (figure 1.) The materials are applied at predetermined intervals. The fuel cell is used as a power supply source (col. 1, lines 10-30.) Thus, the claims are anticipated.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beattie et al. (US 6,667,127) as applied in the previous section.

The teachings of Beattie et al. (US 6,667,127) have been presented. Beattie et al. (US 6,667,127) does not teach the step of applying materials using a discharge device. Using discharge devices to apply particles in a layer is well known in the art. Discharge devices supply

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particles to the substrate on the material is applied. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the conductive particles or catalyst particles taught in Beattie et al. (US 6,667,127) to the substrate of the diffusion layer or the catalyst layer using a discharge device in order to form the layer of particles.

With regard to claim 8, which claims a vehicle using the fuel cell as a power supply source. The examiner takes official notice that fuel cell powered vehicles are known in the art. It would have been obvious to one of ordinary skill in the art to use the fuel cells taught in Beattie et al. (US 6,667,127) in a fuel cell powered vehicle in order to supply power to propel the vehicle. The artesian would have found the claimed invention to be obvious in light of the teachings of the references.

#### ***Examiner Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free.)

Mark Ruthkosky

Primary Patent Examiner

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*Mark Ruthkosky*  
4.2.07